



UNITED STATES PATENT AND TRADEMARK OFFICE

NW

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/039,943	11/09/2001	Christopher J. Conway	9858-000039	8445

7590 12/15/2003

Kelly K. Burris, Esq.
Harness, Dickey & Pierce, P.L.C.
Suite 400
7700 Bonhomme Avenue
Saint Louis, MO 63105

EXAMINER

GILMAN, ALEXANDER

ART UNIT	PAPER NUMBER
----------	--------------

2833

DATE MAILED: 12/15/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/039,943

Applicant(s)

CONWAY ET AL.

Examiner

Alexander Gilman

Art Unit

2833

mw

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 September 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 and 37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-31, 37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 5) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 6) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

Art Unit: 2833

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1, 3-5, 7-10, 12-14, 16, and 17, 18, 20, 23, 25, 30, 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art in view of Freeks.

With regard to claims 1, 4, 5, 9, 13, 14, 17, 18, 20, 37 the admitted prior art (the current Application, p. 2, lines 16-23) discloses a pin with an o-ring groove disposed around the cylindrical surface of the sealing cylindrical member, the o-ring groove defining a substantially constant width.

The admitted prior art do not disclose a removal slot which is approximately perpendicular to the o-ring groove.

Freek discloses o-ring removal slot (50) perpendicular to the o-ring groove.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the admitted prior art pin with o-ring removal slot, as taught by Freeks, to simplify removal of o-ring from the pin.

With regard to claims 7, 16, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include a plurality of o-ring removal slots into sealing member, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

Art Unit: 2833

With regard to claims 3, 8, and 12, it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

With regard to claims 18, 20, 25, the admitted prior art when modified by Freerks discloses (Freerks, Fig. 4)

an o-ring removal slot (50) perpendicular to the o-ring groove.

With regard to claim, 23 the admitted prior art when modified by Freerks discloses (the admitted prior art) a groove disposed around an outer surface of the sealing member .

With regard to claim 30 it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

1. Claims 1, 3-5, 7-9, 12-14, 16, and 17, are rejected under 35 U.S.C. 103(a) as being unpatentable *Boisvert et al* in view of *Freerks*.

With regard to claims 1, 4, 5, 9, 13, 14, 17, *Boisvert et al* (US 5,187,277) (Fig. 7a) discloses a pin (305) with an o-ring groove disposed around the cylindrical portion of the sealing cylindrical member.

Boisvert et al do not disclose a removal slot which is approximately perpendicular to the o-ring groove.

Freerks discloses o-ring removal slot (50) perpendicular to the o-ring groove.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide *Boisvert et al* with o-ring removal slot, as taught by *Freerks*, to simplify removal of o-ring from the pin.

With regard to claims 7, 16, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include a plurality of o-ring removal slots into sealing member, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

Art Unit: 2833

With regard to claims 3, 8, and 12, Boisvert et al disclose (col. 9, lines 49-56) a housing of connector connector connected to a torch lead.

1. Claims 1, 2, 10, 11, 18, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Almeras in view of Freerks.

With regard to claims 1, 10, and 18, Almeras (US 5,637,006) discloses (Fig. 1) a pin (34) with an o-ring groove (39) disposed around the cylindrical surface of the sealing cylindrical member, the o-ring defining a substantially constant width.

Almeras do not disclose a removal slot which is approximately perpendicular to the o-ring groove.

Freeks discloses o-ring removal slot (50) perpendicular to the o-ring groove.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide, Almeras pin with o-ring removal slot, as taught by Freeks, to simplify removal of o-ring from the pin.

As for using the pin in a connector of a plasma arc apparatus, it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. Ex parte Masham, 2 USPQ2d 1647 (1987).

With regard to claims 2, 11, and 22, Almeras discloses the o-ring groove (39) is recessed within a housing (22) of connector.

1. Claims 24, 27, 28, 30, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mengle in view of Freerks.

With regard to claims 27 and 28, Mengle (US 3,557,848) discloses (Fig. 1) a sealing member with a o-ring shoulder disposed around an cylindrical surface of the sealing member.

Mengle does not disclose a removal slot.

Freeks discloses o-ring removal slot (50) perpendicular to the o-ring groove.

Art Unit: 2833

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the Mengle's sealing member with o-ring removal slot, as taught by Freeks, to to simplify removal of o-ring from inside of the tubular sealing membe. .

With regard to claim 30, it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

With regard to claim 31, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include a plurality of o-ring removal slots into sealing member, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

1. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art in view of Freeeks

The admitted prior when modified by Freeeks discloses all of the limitations except for
a plurality of o-ring removal slots.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include a plurality of o-ring removal slots into sealing member, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

2. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art in view Freerks and further in view of Nejad.

The admitted prior when modified by Freeks discloses all of the limitations except for
chamfered edges of the removal slot.

Nejad (US 5,564,175) discloses chamfered edge of the removal slot (326).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the sealing member with chamfered edges, as taught by Nejad, to insert a tool from a convenient position.

Art Unit: 2833

1. Claims 6 and 15, are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art in view of Freerks as applied to claims 1 and 10 respectively, and further in view of Nejad.

The admitted prior art when modified by Freerks discloses all of the limitations except for
chamfered edges of the removal slot.

Nejad (US 5,564,175) discloses chamfered edge of the removal slot (326).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the sealing member with chamfered edges, as taught by Nejad, to insert a tool from a convenient position.

1. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mengle in view of Freerks, as applied to claim 27, and further in view of Nejad.

Mengle when modified by Freerks discloses all of the limitations except for
chamfered edges of the removal slot.

Nejad (US 5,564,175) discloses chamfered edge of the removal slot (326).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the sealing member with chamfered edges, as taught by Nejad, to insert a tool from a convenient position.

Response to Arguments

Applicant's arguments filed 09/26/2003 have been fully considered but they are not persuasive.

Regarding claim 18, Applicants argue that the sealing member fail to disclose a cylindrical surface .

As it was shown in this rejection, the admitted prior art (which is a primary reference) discloses the cylindrical surface for disposition of o-ring and the o-ring defining a substantially constant width.

Art Unit: 2833

In this rejection, the amended claims were rejected over the admitted prior art in view of Freerks. Freerks was recited for showing the removal slot only. The rest of the limitations are met by the admitted prior art.

Regarding claims 1,3-5, 7-9, Applicants argue that the secondary reference (Freerks) fails to disclose the groove of substantially constant width disposed around the cylindrical surface.

However, the primary reference (the admitted prior art) discloses the groove of substantially constant width being disposed around the cylindrical surface.

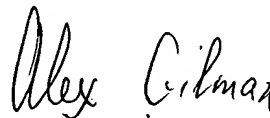
Freerks was recited for showing the removal slot only.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander Gilman whose telephone number is (703) 305-0847. The examiner can normally be reached on Monday-Friday, 10:30 a.m. - 8:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula A. Bradley can be reached on (703) 308-2319. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4900.

12/012/2003



**ALEXANDER GILMAN
PRIMARY EXAMINER**